

Abstract

[0044] A router circuit has an electrical-to-optical converter for changing the plurality of electrical input signals into a plurality of optical input signals. A mixing circuit is coupled to the electrical-to-optical converter. The mixing circuit generates a plurality of substantially identical composite signals corresponding to the plurality of optical inputs. The composite signals comprise at least a portion of each of the plurality of optical signals. A plurality of optical bandpass filters is coupled, respectively, to each of said plurality of composite signals. The bandpass filters pass a portion of the composite optical signals to form a plurality of filtered signals. An optical-to-electrical converter is coupled to the plurality of bandpass filters. The optical-to-electrical converter converts the plurality of filtered optical signals into a respective plurality of electrical output signals.